REMARKS

The present application includes claims 1-28. Claims 1-10 and 16-28 were rejected by the Examiner and claims 11-15 were objected to. By this amendment, claims 10 and 21 have been amended. In the April 6, 2004 Official Action, the Examiner cited the following objections and rejections:

- Claims 1-10 and 16-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hsieh (U.S. Patent 5,331,682);

- Claims 11-15 were objected to as being dependent upon a rejected base claim.

I.   THE SECTION 102 REJECTION

The Applicant first turns to the Examiner's rejection of claims 1-10 and 16-28 under 35 U.S.C. § 102(b) as being anticipated by Hsieh (U.S. Patent 5,331,682). Hsieh discloses a standard response curve which may be used to offset the charge retention of the detectors (5:30-33). However, the standard response curve in Hsieh is effective only for a fixed frame rate and does not apply to a varying frame rate. The applicant's invention is not limited to a fixed frame rate and is thus not anticipated by Hsieh.

As disclosed in paragraph 28 of the applicant's specification, the offset induced by switching charge retention changes with frame rate. As such, the signal necessary to compensate for the offset is dependent upon the frame rate. However, if the frame rate is constant, the induced offset is predictable, and an appropriate compensatory signal may be generated. As disclosed in paragraph 6 of the specification, previous systems would generate an offset compensation value for each row based on a constant frame rate and store that offset compensation value in memory. The offset compensation value would

10

then be added to the incoming signals during operation of the detector to produce a compensated image. In order to achieve the benefits of th offset compensation value, however, prior art systems as discussed in paragraph 6 must operate at the constant frame rate.

Hsieh utilizes the constant frame rate technique. (4:65-66; 4:65-5:9; 5:40-50; 5:51-55). The frame rate as disclosed in Hsieh is "approximately one second" (6:24-27). The offset compensation value as disclosed in Hsieh and based on an "approximately one second" frame rate, is composed of a standard response curve and various coefficients which are fitted to the standard response curve (Abstract; 6:10-15). The standard response curve is generated during manufacture of the CT system (4:59) and represents the "predictable" offset at a constant frame rate as discussed above. Various coefficients are generated and are fitted to the standard response curve to calculate a correction value (6:24-51). As mentioned above, in order to achieve the benefits of the offset compensation value, Hsieh must operate with one second between frames.

In the present invention, the offset compensation values are dynamically adjusted as the frame rate changes (paragraph 9 of application). The example shown in Figure 4 illustrates various offset value curves. The appropriate offset value curve is a function of the amount of time between frames. As illustrated in Figure 4, the time between frames may vary between zero and infinity. Curves for other durations of time between frames, for example x or y, may be calculated using phantom measurements as discussed in paragraph 33 of the applicant's specification. As such, Hsieh does not teach generating a plurality of image frames at varying frame rates and does not anticipate the present invention.

11

Moreover, as mentioned above, the adjustment values of the present invention are generated in response to phantom measurements. The phantom measurements are used to create various adjustment values, which comprise the offset curves shown in Figure 4. Once the adjustment values are generated, they may be applied during the process of normal readout so as to compensate for the offsets caused by the total charge retention for each row. As mentioned above, the adjustment values which make up the standard response curve in Hsieh are generated during manufacture of the CT system (4:59). As such, Hsieh does not use phantom measurements to create adjustment values and does not anticipate the present invention.

The system and method of Hsieh does not teach generating a plurality of image frames at varying frame rates. This element is cited in independent claim 1 and claim 10. Nor does the system and method of Hsieh teach signals being dynamically adjusted for variations in charge retention, whether positive or negative, as frame rate changes as cited in independent claim 21. Moreover, Hsieh does not teach phantom time segment prior to normal signal readout nor does Hsieh teach a phantom measurements. These elements are cited in independent claim 1 and amended independent claims 10 and 21. Therefore, Hsieh does not teach the elements of independent claims 1, 10, or 21 or their respective dependent claims and such claims are believed to be allowable in their present condition. Applicant respectfully submits that the claims of the present application should be allowable.

12

CONCLUSION

Accordingly, the application as amended is now believed to be in condition for allowance and an action to this effect is respectfully requested. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited and encouraged to contact the Applicant at the number below. As no new claims have been added to the application, Applicant believes no fee is due. However, please charge any additional fees or credit overpayment to the Deposit Account of GTC, Account No. 070845.

Respectfully submitted,

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13